

WEDNESDAY, MARCH 27TH, 1901.

THE Twenty-sixth Annual General Meeting of the Society was held in the Linnean Hall, 23 Ithaca Road, Elizabeth Bay, on Wednesday evening, March 27th, 1901.

The Hon. James Norton, LL.D., M.L.C., President, in the Chair.

The Minutes of the previous Annual General Meeting were read and confirmed.

The President delivered the Annual Address.

PRESIDENTIAL ADDRESS.

During the year just expired, ten new members have been elected and two have resigned, but we have had no losses by death. There are now on the roll 118 ordinary members, 5 associate members, and 19 honorary and corresponding members. Although these figures do not show as large an increase as we had hoped for, it is a matter for congratulation that the Society has not retrograded.

I regret to have to mention that, on account of the pressure of other arduous duties, Professor Wilson has felt compelled to resign his membership of the Council. Mr. W. S. Dun, F.G.S., was elected in his place, but, under section 6 of the Act of Incorporation of the Society, he now retires, and it rests with you to elect a President and six members of committee, in the place of myself, Dr. J. C. Cox, Dr. Thomas Dixson, Mr. W. S. Dun, Professor W. A. Haswell, and Mr. Perceval R. Pedley, who retire by rotation, but are all eligible for re-election.

In the Bacteriological section, Mr. Greig Smith has been steadily at work, the results of which are shewn in the nine

papers read by him before the Society during the year; and the Bacteriological plant is all in excellent condition.

The 100th Part of the Proceedings completing Vol. xxv., is in the press and will shortly be ready for issue. The publication of the "Catalogue of the Described Mosses of New South Wales," contributed by Rev. W. W. Watts and Mr. Whitelegge, has had to be deferred for the present, but it is hoped that the Society may be able to accomplish it during this year.

The caretaker's lodge has been repaired and much improved at an expense of £80 8s. 6d.

At the meetings of the Society there have been read 48 papers on various interesting subjects, including 12 dealing with ordinary botanical matters and 9 on bacteria—now admitted to belong to the vegetable kingdom.

It is not surprising that botanical research should form one of the leading features of a Society named after the immortal founder of a system magnificent in its simplicity.

Previously to his time, botany can hardly be said to have existed, for there was no intelligent scheme of nomenclature or classification; not infrequently flowers were called "roses, lilies," &c., and fruits "apples, pears," &c., without being in any way related to the orders in which those names occur; and trivial names, even more ridiculous than those used in Australia, were conferred on all common plants.

Thenceforth, however, confusion was replaced by order, and uncertainty by certainty; botany was no longer looked upon as triviality, unworthy of scientific men, and books, teaching its principles and illustrating the beauties and wonders of the vegetable kingdom, began to be freely published, and have continued to improve up to the present time, affording a rational delight to tens of thousands.

Although the system of Linnæus has been almost entirely superseded by the natural system, his main principle has really been incorporated into, and forms part of the latter, the chief

element in which is the generative system of flowers, in many respects so strikingly like that of animals.

Botanists, especially beginners, who have been accustomed to use "Loudon's Encyclopædia of Plants," with its astounding mass of condensed information, can testify to the great assistance which it affords them at a very small sacrifice of time.

The despised aborigines of Australia, in addition to being astronomers, were undoubtedly the first Australian botanists, for, although they had no distinctive names for the various parts of flowers, and could not count the stamens or pistils on which Linnæus founded his system, yet they had a distinctive and probably descriptive name for every conspicuous plant which grew in their respective territories, and, as I understand, for many classes of plants also, such, for instance, as ferns, gum trees, and acacias. Banks, in his Journal, states that they had some knowledge of plants, as he could plainly perceive by their having names for them.

They were necessarily driven, by an inhospitable and uncertain climate, to turn to account, as a means of subsistence, every thing which could possibly help them to sustain life; to enable them to do this, they were compelled to take precautions against injury from the use of some plants which, through their poisonous properties, would otherwise have been seriously injurious if not fatal to them.

They knew also the medicinal and curative properties of plants, and by their aid often effected marvellous cures of diseases and wounds.

In illustration of what I have said of the classification of plants by the aborigines, I may state that a very intelligent half-caste native of Shoalhaven, some time since informed me that his people were accustomed to use a decoction made from a certain plant as a cure for diarrhœa, and that there were three different kinds of this plant. On his bringing me specimens, they turned out to be *Rubus mollucanus*, *R. parvifolius*, and *R. roseifolius*.

This man also described the mode in which they prepared *Macrozamia* nuts for food, the principal thing necessary being the maceration of the nuts in water for several days, and he said that the arrowroot, which his master was then eating, was just like the preparation which his mother used to make for him out of these nuts when he was a boy.

Banks tells us that Captain Cook's people were assured by the natives that they ate the seeds of a plant, which appears to have been *Cycas media* (a near relation of the *Macrozamia*), and that, encouraged by this information, the officers ate some of them, but, being ignorant of the necessity for maceration, they were deterred from making a second experiment by a hearty fit of vomiting. The hogs, which were still shorter of provisions than the crew, ate these seeds heartily, and, about a week after, were all taken extremely ill of indigestion and two died, the rest being saved with difficulty.

For the first glimmerings of light upon the vegetation of Australia (Sir Joseph Hooker says) we are indebted to Dampier, who in 1688 visited Cygnet Bay. The genus *Dampiera* was named in his honour. His herbarium was, till lately, if it is not still, preserved at Oxford and contained 40 specimens, 18 of which (9 being Australian) were figured in the account of his voyage published in 1703, but both figures and descriptions are exceedingly quaint and inartistic, and the names given to them quite as crude and unintelligible. The specimens were worked out by William Baxter, Curator of Oxford Botanical Garden, between 1813 and 1851.

The first scientific Australian botanists, who deserved that designation, were the noble Sir Joseph Banks and his worthy assistant, Dr. Solander, who were so delighted with the entirely new, strange, and distinctive flora, which they discovered around Cook's first landing-place, that they induced him to change his name of "Stingray Bay" to "Botany Bay."

Cook's expedition anchored on 28th April, 1770, and departed only a week afterwards, in prosecution of its voyage along the

east coast of Australia; but these enthusiastic botanists made good use of the short time allowed them, and availed themselves with equal avidity of every other subsequent opportunity to increase their collections and their knowledge of Australian vegetation.

It is easy to imagine the delight with which they must have hailed the discovery of the wealth of a flora, then for the first time displayed to scientific and appreciative eyes, the greater part of which was absolutely endemic; unfortunately they were not here during the blooming season of our most conspicuous flowers, or while the whole neighbourhood was aglow with kaleidoscopic beauty, as it is in early spring.

One of the most conspicuous genera of the order *Proteaceae* was named *Banksia* in honour of the discoverer, but the name of Dr. Solander, having been previously utilized for a West Indian solanaceous plant, does not appear among the genera of our flora.

After the death of Banks, the collections made by him and his assistant, together with considerable further collections, made during Cook's subsequent voyages by the Forsters, Mr. David Nelson, and Mr. William Anderson, were handed over to the British Museum, where, without having ever been published, they were hoarded for long years, as if they had been brought there solely for the purpose of being stored, and, as Bentham complains, became, with Cunningham's subsequent collections, practically unavailable for use.

From a note of Anderson's, we find that the leaves of *Leptospermum scoparium* were used as a substitute for Chinese tea, and were found to be of a pleasant taste and smell; hence the popular name of "Tea-tree," not "Ti-tree" as it is often written. *Forstera*, a Tasmanian genus of *Stylideae*, was named in honour of the Forsters; *Nelsonia*, a genus of *Acanthaceae*, in honour of Nelson; and *Andersonia*, a genus of *Epacrideae*, in honour of Anderson.

In 1788 Mr. John White arrived in Sydney as surgeon-general to the settlement, and during seven years collected a considerable

number of plants, and made drawings of others, which were published by Sir James Smith in his "Specimen of the Botany of New Holland," in "White's Journal of a Voyage to New South Wales," and in other works. In the "Specimen" some of these plants, including the Waratah, there called "*Embothrium*," were very creditably figured and colored.

In 1791, Captain Vancouver's expedition was accompanied by Mr. Archibald Menzies as botanist, who formed a good collection of the singular and extremely beautiful flora of King George's Sound.

In the same year the French expedition, under Captain D'Entrecasteaux, in the "Recherche" and "Espérance" in search of La Perouse, visited South Western Australia and Tasmania, where considerable collections were made by Monsieur J. J. Labillardière, who published figures and descriptions of 265 of the most interesting in his "Novæ Hollandiæ Plantarum Specimen," and described and figured others in his narrative of the voyage, which was accompanied by folio plates of several of the plants: the genus *Billardiera* was named after him.

About 1794, Colonel Paterson, who was in command of the New South Wales Corps, zealously devoted himself to investigating the botany of the colony and the northern part of Tasmania, of which he was Lieutenant-Governor from 1804 to 1810. It was after him that the beautiful evanescent *Patersonia* was named.

About 1800, Mr. George Cayley was sent by Banks, still thirsting for Australian botanical knowledge, to New South Wales, where he resided, botanized and made extensive collections, which went to the British Museum. His name was given to the terrestrial orchid "*Caleyana*."

Captain Flinders, who was the first circumnavigator of the entire island (to which he appears to have been the first to apply the name of "Australia"), conducted an expedition in 1801 and two succeeding years in H.M.S. "Investigator," in which he visited every bay, promontory and important feature of the

entire coast. He was accompanied by Dr. Robert Brown, the most keen and observant of all the botanists of Australia, who possessed the same extraordinary faculty of observation as was afterwards displayed by Gould, in connection with the birds of Australia. His "*Prodromus Floræ Novæ Hollandiæ*" is regarded by all botanists almost with reverence, and he has been well called "The father of Australian botany." He was ably assisted in his work by Ferdinand Bauer, a draftsman whose name has been utilised to form the name "*Bauera*," and by Peter Good, a gardener, from whom the genus "*Goodia*" takes its name.

These gentlemen made collections, not only at King George's Sound, but on the Blue Mountains, and at Bass' Straits and Tasmania; and Sir Joseph Hooker, on their account, speaks of Flinders' voyage, as far as botany was concerned, as the most important in its results ever undertaken, and the results incomparably greater, not merely than those of any previous voyage, but than those of all similar voyages put together, and says that the *Prodromus*, though only a fragment, had for half a century maintained its reputation unimpugned of being the greatest botanical work that had ever appeared.

His extraordinary collection of specimens is admitted to be the foundation in England of the knowledge of Australian vegetation, and to show conclusively his power of observation, sagacity, zeal and industry, which, during his short visits, often exhausted the flora of the parts he touched at.

When Brown commenced his labours, the number of ascertained Australian plants amounted to 1,300, of which 1,000 had been collected for the most part by Sir Joseph Banks. To this collection Brown added nearly 3,000 species.

He was fortunate in not accompanying Flinders in his subsequent voyage in the "*Porpoise*," which, with the "*Cato*," was wrecked on the Cato reef; and in the "*Cumberland*," which afterwards called at Mauritius, where her commander, to the eternal disgrace of the French Government, was imprisoned for six and a-half years, in order, it is believed, to enable Péron's account of

the French expedition next mentioned to be published before, and so take precedence in nomenclature, &c., of Flinders' account, which, with its valuable appendix containing Brown's general remarks on the botany of "Terra Australis," was thus delayed till 1814. Brown's Prodrômus, however, with its valuable illustrations, had, fortunately, been published in 1810: *Flindersia*, a genus of fine trees of the order *Meliaceæ*, of particular interest to Queenslanders, was named in honour of Flinders, and *Brunonia*, a genus of *Goodenovicæ*, in honour of Brown.

Captain Baudin's expedition, in the "Geographe," "Naturaliste" and "Casuarina," before alluded to, fell in with Flinders' expedition on the south coast of New Holland, on 8th April, 1802, when, although their nations were at deadly war with each other, they, being protected by passports, met on the most friendly terms. The French expedition was accompanied by M. Leschenault de la Tour, as botanist, who made good collections of specimens, and Brown named the beautiful genus *Leschenaultia*, of Western Australia, after him.

In 1802, David Burton was also sent out by Sir Joseph Banks to collect plant specimens in New South Wales, and *Burtonia*, of the *Leguminosæ*, was named after him.

In 1816, Allan Cunningham, His Majesty's botanical collector for Kew Gardens, arrived in New South Wales, and in 1817 he and Mr. Charles Fraser, colonial botanist, accompanied the expedition of Lieut. Oxley, Surveyor-General, into the interior, covering 1200 miles; and in 1824 he again accompanied Oxley in an expedition to arrange for the foundation of a northern settlement. In 1823 Oxley had discovered and partially explored the Brisbane River, and in 1824, he, with Cunningham, completed the survey of that river to the highest reach which his boats could navigate. Cunningham on that occasion made several important botanical discoveries, including particularly a new *Araucaria*, which has been very appropriately named *Cunninghamii*, a handsome tree named *Flindersia Oxleyana*, and a noticeable bulbous plant named *Eurycles Cunninghamii*.

That meddlesome fire-brand, Dr. Lang, in his eagerness to bespatter an official, endeavoured to deprive Oxley of the honour of his discovery, but his unfounded statements have been most ably and conclusively refuted by the Right Honorable Sir Hugh M. Nelson, in his last year's address to the Queensland Geographical Society. A statue has been erected to the memory of the reverend libeller; but the noble fellow, whom he tried to belittle, rests in an unknown grave, and his remains will probably be carted away in the common ruck, to make room for the proposed new Sydney railway terminus.

Between the years 1818 and 1821, Cunningham accompanied Admiral King in some or all of his four voyages to King George's Sound, Dampier's Archipelago, Hobart Town, Macquarie Harbour, Torres Straits, and many intermediate places. He subsequently visited many parts of the interior, and, in February, 1831, returned to England; but, after the unfortunate loss of his brother Richard, in Mitchell's expedition of 1835, he accepted the office of Colonial Botanist, and, in 1839, died at the age of 48, in the Sydney Botanic Gardens, where a monument was erected to his memory. There can be little doubt that his life was shortened by the hardships which he had so long and so continuously undergone.

As Sir Joseph Hooker remarks, his botanical travels were the most continuous and extensive that have ever been performed in Australia, or, perhaps, in any other country: his vast collections were, for the most part, transferred to the British Museum.

In 1818, Oxley, accompanied by Fraser, conducted a second expedition into the interior, which was as fruitful in botanical results as the first.

In the same and following year, Captain Freycinet's expedition, in the French corvettes "Uranie" and "Physicienne," accompanied by M. Gaudichaud as botanist, also did good service, and in honour of the leader and of the botanist the name *Freycinetia Gaudichaudi* was bestowed on a Queensland plant.

Afterwards M. Lesson, in "La Coquille" and subsequently in "L'Astrolabe," did some botanical service, and, in 1823, Dr.

F. W. Sieber, of Prague, visited New South Wales and made considerable collections, which were sold: it is from him that we get the name *Siebera*, a by no means conspicuous genus, and this shews how thoroughly the botanical field of the country had been exploited.

In 1823, 1825, and 1829, the vicinity of King George's Sound, Wilson's Promontory, Cape Aird, and Lucky Bay, were explored botanically by Mr. William Baxter, a gardener sent out by private enterprise to collect seeds and plants: the genus *Baxteria* of the *Juncaceæ* was named after him.

Mr. Charles Fraser, already mentioned, a soldier of the 73rd Regiment, after his arrival in New South Wales, became an indefatigable collector and explorer, visited Swan River in 1826-7, and Moreton Bay in 1828, and wrote excellent accounts of those districts. He afterwards visited Tasmania and took charge of the Sydney Botanical Gardens.

In 1827, Robert Sweet published his "Flora Australasica," which is the first really artistic completed work wholly devoted to Australian botany, and contains 56 plates of Australian flowers beautifully drawn and coloured.

Sir Thomas Mitchell's four expeditions into the interior, owing to his great fondness for natural history, and excellent system of observation, resulted in valuable contributions to botanical knowledge. In the first (1831) he was accompanied by Richard Cunningham, before mentioned, whose zeal for research led to his wandering away from his party, when he was murdered by the blacks.

The second expedition (1835) was sent out to explore the Darling River, and the third (1836) to explore the same river and the mountains of Victoria and the Alpine vegetation, with the assistance of Mr. Richardson. The fourth (1846) was to sub-tropical Australia and the Gulf country: the accounts of these expeditions, and particularly the last, abound in interesting botanical information.

Mr. James Backhouse, in 1832, visited New South Wales, Tasmania, Queensland, Victoria, South Australia, and Western

Australia, solely for the purpose of discharging a religious duty, but, owing to his knowledge of botany, his connection with a leading horticultural establishment in England, and his love of observing and collecting, the results of his journey have proved extremely valuable.

He kept journals and formed a considerable herbarium, including many plants collected by Sir William Macarthur: his name is commemorated in that of the genus *Backhousia*.

Mr. Ronald Campbell Gunn, with his friend and companion Mr. Robert William Lawrence, of Tasmania, who died in 1832, commenced exploring the northern parts of that island, and afterwards, between 1832 and 1850, collected so indefatigably over a great part of Tasmania, that there are few plants there which he did not see alive and collect: his collections were all transmitted to England in perfect preservation, accompanied by notes which displayed remarkable powers of observation and a facility for seizing important characters in the physiognomy of plants, such as few experienced botanists possessed: the name *Gunnia* was bestowed in his honour on the only epiphytal orchid in Tasmania, now relegated to *Sarcochilus*.

In 1833, Baron Charles von Hügel, an Austrian, made considerable collections in the Swan River colony, and, in 1837, commenced the publication of his "Enumeratio Plantarum," which, however, was never finished.

In 1838, the establishment of Port Essington was attempted for the fourth time by Sir Gordon Bremer, and Mr. Armstrong went to reside there as collector for the Kew Herbarium. John McGillivray was stationed there for some time, and in 1842 he accompanied an expedition in H.M.Ss. "Fly" and "Bramble," sent out to make a further survey of the tropical coasts of Australia. In 1847 he accompanied an expedition in H.M.S. "Rattlesnake" to Port Curtis, Rockingham Bay, Port Molle, Cape York, and Goold, Lizard and Moreton Islands, and, owing to the death of Captain Stanley, the narrative devolved upon him. His book abounds in interesting observations on the vegetation of Australia.

In 1838, Dr. Ludwig Preiss, at Swan River, made collections of upwards of 2,000 species of plants, including *Cryptogamia*, which were sold after a complete account of them had been published by various authors in "Plantæ Preissianæ," edited by Dr. Lehmann in 1844-5.

In 1839, Mr. James Drummond, of Swan River, one of the most zealous of Australian botanic collectors, commenced operations, and continued his work for upwards of 15 years. His labours took the practical form of collecting and forwarding for sale in Europe the plants of his district, including a vast number of novelties, rivalling in interest and importance those of any other part of the world. Dr. Lindley's able sketch of the vegetation of the Swan River is founded chiefly on Drummond's collections.

Capt. Mangles, at this time, collected many species of Western Australian Plants, and John Bailey, the Colonial Botanist of South Australia, arrived and made collections of living plants and seeds; but, as the native flora of Adelaide is probably the least interesting of those of all the Australian colonies, he soon directed his energy more towards the introduction of useful foreign economic plants. Whether he introduced those which, in many parts of the neighbourhood have almost entirely superseded the native vegetation, I do not know, but the varieties and masses of foreign plants which clothe many hundreds of acres of land lying between the capital and the mountains, is truly surprising.

In 1839, an Antarctic expedition, in H.M. Discovery ships "Erebus" and "Terror," under the command of Sir James Clark Ross, and accompanied by Sir Joseph Hooker as botanist, and Dr. Lyall, was started, and its four years' work resulted in the publication of six magnificent volumes on the New Zealand, Tasmanian and Antarctic Islands' floras, the price of which is unfortunately almost prohibitory. The preface to the "Flora of Tasmania" is an admirable introductory essay on the flora of Australia generally, to which I am much indebted in connection with this address.

The several expeditions heretofore mentioned were, for the most part, comparative child's-play, compared with the land

expeditions hereafter mentioned ; for, with well provisioned ships to fall back upon, and to store the treasures collected, the explorers enjoyed most of the comforts to which they had always been accustomed. It was a very different thing when, instead of merely skirting the coast, they pushed boldly into the mysterious unknown heart of the country, which hurled defiance at the puny invaders of its vast dreary solitudes ; but the spirit of enterprise, insuppressible in the Anglo-Saxon race, impelled its members from time to time to press forward into the vast unknown, with their lives in their hands, and, notwithstanding failure succeeded by failure, fresh victims were always ready to take the places of those who had failed ; ultimately perseverance and pluck were crowned with success, in spite of the merciless attacks of unfeeling savages, in spite of cruel thirst often prolonged for days together under a burning sun, and in spite of hunger, often allayed only by killing their cattle, horses and camels, reduced to skeletons, as these poor animals were, when the time for their sacrifice had arrived. In illustration of the distress to which explorers were sometimes reduced for want of food, I may mention that on one occasion Ernest Giles, being alone in the desert, and on the very verge of starvation, heard a faint squeak, and immediately saw and pounced like an eagle upon a dying wallaby, and ate it "living, raw, dying, fur, skin, bones, skull, and all," and thought he should never forget the delicious taste of that creature weighing about two ounces, and he could not help wishing that he had its mother and father to serve in the same way.

In 1840, Captain Eyre's perilous journey from Adelaide to Swan River produced little more than negative botanical results, as there appeared to be, between Streaky Bay and Lucky Bay, scarcely any vegetation at all. He was accompanied by an overseer and three black boys, two of whom, during his temporary absence, plundered the camp, shot the overseer, and decamped ; but with the remaining boy, he managed, after terrible hardships, to reach his destination.

In 1842, Charles Stuart began collecting in Tasmania and New South Wales, and continued so doing for many years, paying special attention to New England.

In 1844, the necessary funds were raised, by private subscription, to enable Dr. Ludwig Leichhardt to conduct an overland expedition from Moreton Bay to Port Essington. After the lapse of two years and two months, when everyone had given up all hope of seeing the Doctor again, he and his party managed to reach Port Essington in an almost starving condition, after their terrible journey of 3,000 miles. Having a considerable knowledge of botany, Leichhardt's narrative is by far the fullest public detailed account of the tropical vegetation of the interior of Australia which we possess.

In 1846, he started on a bolder expedition, from Moreton Bay to Swan River, with a party, of which Mr. John F. Mann is the sole survivor, but the weather and circumstances seem to have been against him, and the party returned, a failure.

However, nothing daunted, he made a second attempt in 1846, and perished miserably with all his party, whose loss is one of the mysteries of the interior, which probably will never be solved. He was evidently thoroughly deficient in the faculty of organization, and too reliant on the luck which had carried him successfully through former troubles, and was eminently unsuited for the position of either organizer or leader of such an expedition, although he was full of zeal and determination.

In 1844, Captain Charles Sturt conducted an unprecedentedly bold expedition to the very centre of Australia, and substituted an interior desert for Oxley's inland sea, but, 15 years afterwards, J. McDouall Stuart also passed through the centre of the continent, and in turn dispelled Sturt's notion of a great central desert. A considerable collection of plants was made by Sturt, amounting to about 100 species, some of which were described by Brown in an Appendix to Sturt's narrative of the expedition. Two of the handsomest Australian flowers, Sturt's Desert Pea (*Clianthus Dampieri*) and Sturt's Desert Rose (*Gossypium Sturti*)

bear his name. His great success in his expeditions procured him the title of "The father of Australian discovery."

The Gregory family were inveterate explorers. In 1846, A. C. Gregory, F. T. Gregory, and H. C. Gregory, without any assistants, commenced operations by making an expedition along the Western coast of Australia. In 1848, A. C. Gregory with C. F. Gregory and others, conducted a second expedition over 1500 miles of country, and in the same year, A. C. Gregory, accompanied by Governor Charles Fitzgerald and others, conducted an expedition from Perth to the Geraldine lead mine, when the Governor received a bad spear wound from the aborigines. In 1855, A. C. Gregory, accompanied by H. C. Gregory, F. Mueller (as botanist), and others, started from Brisbane on an expedition which lasted 16 months, and is more particularly referred to hereafter. In 1857, F. T. Gregory led an expedition to trace the Murchison River to its source, and in 1858, accompanied by James S. Roe (as botanist) and others on a second expedition. In 1857-8, A. C. Gregory with C. F. Gregory and others, conducted an expedition in search of Leichhardt, and in 1861, F. C. Gregory, accompanied by Mr. P. Wallcott (as collector in natural history and botany), conducted another expedition, promoted principally by English capitalists interested in cotton manufacture, who proposed to establish a new colony on the north-west coast, having for its special object the cultivation of cotton.

In 1848, Mr. E. B. Kennedy, accompanied by twelve men, started on an expedition intended to penetrate from Rockingham Bay to Cape York, which he accomplished, but at the expense of the lives of himself and nine of his party. William Carron and two others were by great good fortune rescued, almost at their last gasp: Carron published an account of the expedition, and the story of poor Kennedy's death, so touchingly described by the faithful Jacky Jacky. Carron was an excellent botanist, and, notwithstanding the disastrous termination of the expedition, was able to bring many fresh plants to our knowledge: he was

afterwards employed in the Sydney Botanical Gardens until his death.

In most of these expeditions valuable botanical collections were made, and were afterwards dealt with by Mueller.

About 1847, Mr. William Archer, of Tasmania, who had collected an excellent herbarium, placed it at the disposal of Sir Joseph Hooker, and contributed liberally to the cost of its publication.

In 1848, Mr. James S. Roe, who had accompanied King in his expeditions of 1818 and 1821, and was afterwards appointed Surveyor-General of Western Australia, and took part in nearly every exploring expedition sent forth in that colony, conducted an expedition into the interior, extending over 1800 miles: he was evidently an enthusiastic botanist, and we find his name occurring frequently in the specific nomenclature of the plants of Western Australia.

In 1851, Mr. John Carne Bidwill, a surveyor, who in 1841 published an interesting book, "Rambles in New Zealand," and was for a short time Curator of the Sydney Botanical Gardens, afterwards went to Queensland, where he successfully used his opportunities for doing good botanical service, and was the discoverer of the Bunya Bunya, *Araucaria Bidwilli*. He formed an excellent herbarium, which was transmitted after his death to Sir William Hooker. He died the same year from the effects of over-exertion when cutting his way through the forests of Eastern Australia, between Wide Bay and Moreton Bay, where he lost his way, and though rescued after eight days' starvation, succumbed in acute pain to the injuries he had sustained.

But the greatest of all contributors to Australian botanical knowledge was undoubtedly the late Baron von Mueller, who, after his arrival in Adelaide in 1847, removed to Melbourne, was appointed Colonial Botanist to Victoria, and devoted many years to uninterrupted exertion in travelling and collecting.

In 1853 he visited Fuller's Range, May-day Hills, the Buffalo Ranges, Mounts Aberdeen and Buller, and the Yarra Ranges, descending to the coast of Gippsland, and returning to Melbourne

by Port Albert and Wilson's Promontory, having travelled 1500 miles and collected nearly 1000 species of plants.

In the next year he visited more of the mountains of the colony, many difficult regions of Southern Australia, Lake Albert, the Murray Lagoons, the Cobboras Mountains, the Snowy and Buchan Rivers, travelled 2500 miles, and collected upwards of 500 different plants

In 1844-5 he again visited the Australian Alps, the Avon Ranges, Mount Wellington, the Snowy Plains, the Bogong Range, Mounts Hotham and Latrobe, and the Murrigang Mountains, raising the Victorian flora to 2500 species, including Cryptogams.

In 1855 he accompanied A. C. Gregory in his celebrated expedition before mentioned, from Sydney across Northern Australia, visiting the islands on the east and north coasts, ascending the Victoria River, exploring the limits of the great desert, traversing Arnheim's Land, and reaching the mouth of the Albert in the Gulf of Carpentaria, and the Gilbert River, and then travelling south-east, crossing the Lynd, the Burdekin, the Suttor, the Belyando, the Mackenzie and the Dawson, and returning to Sydney, viâ Brisbane, without the loss of a member of the overland expedition.

This extraordinary journey was considered only second in point of interest and extent of unknown country traversed to Leichhardt's first expedition, especially as continuous and systematic collections and observations abounding in novelty and interest were made.

Mueller is said to have travelled, in his various expeditions, over 20,000 miles. Sir William Hooker refers to him as the "Prince of Australian botanists," and Bentham appears often to have deferred to his opinion on account of his having had the opportunity of seeing living specimens, though Bentham himself, on account of his knowledge, not only of Australian botany, but of that of the whole world, must have been a more competent classifier than one who dealt with the local flora only.

Mueller formulated the cortical system of grouping our gigantic myrtles after having found that woodcutters, by paying attention

to the bark and timber, could distinguish the ordinary species more readily than scientists by the inflorescence.

Like most systematic botanists, Mueller seems to have had little or no love of horticulture, and consequently complaints were made that the Botanical gardens under his charge were neglected and in a slovenly condition, and ultimately they were taken out of his hands. Mr. W. R. Guilfoyle having been appointed Curator, and being a practical landscape gardener as well as a botanist, has since worked wonders in improving them, and has satisfied every one except the Baron, who was never able to forgive him up to the time of his death in 1896.

The numerous botanical publications which redound to the credit of the Baron's memory, are too well and too favourably known to make it necessary for me to mention them categorically.

It is not possible to overestimate the value of these works, particularly as, through extended settlements, ringbarking, overstocking and other causes, the original flora is being constantly destroyed, though not unfrequently replaced by importations of worthless or even injurious plants.

In 1854, Mr W. H. Harvey came to Australia for the express purpose of investigating the algology of its shores, and visited King George's Sound, Swan River, and Cape Riche, Melbourne, Tasmania and Sydney, forming a magnificent collection; many of his specimens have been published in "*Phycologia Australica*," which is illustrated with 240 beautiful colored plates.

In 1858, Mr. Babbage conducted an expedition to the north-east of Lake Torrens, and was accompanied by Mr. David Hergott as botanist, who seems to have made up a good herbarium, which was reported on by Mueller.

Between 1858 and 1862, John McDouall Stuart conducted several expeditions from Adelaide into the interior, and finally succeeded in reaching the Indian Sea, which Burke and McKinlay did not actually, though they did virtually, succeed in doing. During these expeditions of Stuart's, the first botanical exploration of the Larapintine region took place, and the expeditions

themselves seem to have exceeded in importance and interest those of all previous explorers.

In 1863, was commenced the publication of the "Flora Australiensis," by George Bentham, assisted by Mueller, the chief foundation of which was the vast herbarium of Sir William Hooker, but every other Australian herbarium of any importance was examined, and this involved so great an amount of time and trouble that the last of the seven volumes did not appear till 1878. The book was published under the authority of the several Governments of Australia, and is unquestionably the most important Australian botanical work ever published. It contains a minute description of almost every Australian plant, whether conspicuous or otherwise, and it is not an easy matter to find any plant within a hundred miles of Sydney which is not described in it. Fortunately, Bentham was able to complete it before his death, and it now stands an imperishable monument to his memory. The seven volumes contain complete descriptions of upwards of 8000 species of plants, with references to at least as many synonyms, the approximate number of recognised species of living plants in the whole world being, up to the end of the nineteenth century, according to Professor Vines, 275,576.

In order to emphasize the importance of this great work, Her Majesty Queen Victoria was advised to confer on Bentham the Companionship of the Order of St. Michael and St. George, and to raise Mueller, who already possessed that distinction, to the Knight Companionship of the Order.

The last volume of the Flora having been issued 23 years ago, it was considered extremely desirable that a supplement, containing all subsequent discoveries, should be issued; and as a large proportion of these discoveries belonged to Queensland, it was hoped that the matter would be entrusted to Mr. F. M. Bailey, Botanist to the Queensland Government, whose numerous publications, such as the "Synopsis of the Queensland Flora," "The Companion for the Queensland Student of Plant Life," "The Fern World of Australia," and its companion, "Lithograms of

the Ferns of Queensland," comprising 191 plates of ferns copied by direct impression of the fronds off the stone, prove beyond doubt his eminent fitness for the work, for which he at once made preparations ; but, as Mueller, with some show of reason, claimed the right to continue the work in which he had assisted Bentham, Bailey at once gave way on condition that Bentham's system of classification and nomenclature should be continued. As this did not satisfy Mueller, and the usual intercolonial jealousies unfortunately came into play, the matter was dropped ; but Bailey has commenced the publication of a new work, incorporating all the Queensland species of plants comprised in Bentham's book, with all the recent Queensland discoveries, and leaving all the other States to take care of themselves : a most unfortunate check to future as well as present botanical studies !

The terrible hardships which had from time to time been undergone by explorers in endeavouring to penetrate the interior led to the belief that it was impossible to reach the centre, much more to cross from sea to sea ; but in 1861 the intrepid Burke and Wills, who were by no means so fit to make the attempt as many others, started from Melbourne with a considerable party and a number of camels just imported by the Government from India. In their eagerness to push ahead, they, with King and Gray, left their party at Cooper's Creek and reached the Gulf of Carpentaria, though they did not actually stand on its shore and pick up shells as McDouall Stuart did, nor did they even see the ocean.

Being compelled to turn back for want of provisions and from exhaustion, they reached the camp in a most wretched condition, only to find that their party had left it, on the way home, a few hours before. After a hopeless struggle for a short time, nothing was left for them but to lie down and die, though King, with the assistance of the blacks, managed to survive until the arrival of a rescue party, after which they received the barren reward of a costly monument erected in Melbourne. Wills' journal, kept up to his death, contains a good deal of botanical information.

The anxiety, caused by the non-return of Burke and Wills and of Leichhardt at the expected times, gave a great impetus to further explorations, and resulted in an expedition under Landsborough from Carpentaria, another under Walker from Rockhampton, and another under M'Kinlay from Adelaide, which reached within a few miles of the Gulf of Carpentaria.

Mueller, in an appendix to the account of Landsborough's expedition, gave a list of the plants known to exist at the Gulf, and remarked upon the general similarity of the inter-tropical productions to those of the extra-tropical parts of Australia, and thought it likely that no other country retained its similarity of features throughout so great an area and through so many degrees of latitude.

The feat of crossing Australia had now been accomplished six times, and the road across was beginning to be almost considered a beaten track.

In 1869, John Forrest conducted an expedition in search of Leichhardt, and, in 1870, accomplished a journey from Adelaide to Perth round the great bight, over the track which had been so nearly fatal to Eyre; and in 1874 he travelled from Perth to the central telegraph line, which had then been stretched right across the continent. The account of his last journey contains an appendix by Mueller of the plants collected.

Mr. Thomas Elder most patriotically fitted out three expeditions, and after having introduced 121 camels, started Colonel P. E. Warburton from Adelaide in 1872. The spirit of exploration, which had started the remarkable expeditions of Roe, Lefroy and Hunt, having now been greatly encouraged by Governor Weld, through whom the Messrs. J. and A. Forrest had successfully pushed their explorations further and further into the waste of salt swamps which filled the centre of the continent; after suffering great hardships Warburton was only just able to reach Roeburne on his way to Perth, after picking the bones of his last camel. His health was so greatly broken that he could do little to assist the publication of the account of his expedition. Dr.

Trimen, of the botanical department of the British Museum, dealt with the plants collected by him.

Between 1872 and 1876, Ernest Giles conducted five expeditions, in the last of which he crossed the continent from Perth to Melbourne, and in all collected many thousands of plants which, however, with the exception of those of the first two expeditions, were lost. Those saved were classified and named by Mueller, and included in an appendix to Giles' book, "Australia Twice Traversed."

The botanical map of Australia, so to speak, having now been fairly well drawn and filled up, with the exception of spaces here and there left to be dealt with by future workers, it is not necessary to go laboriously into the accounts of all botanical discoveries which have followed those before-mentioned, with the exception of one which will be mentioned later on; but it seems fitting to mention a few of the late botanical workers of Australia, among whom the first name which suggests itself to me is that of the Rev. Dr. Woolls, who was a most energetic and enthusiastic worker, was persistent in his endeavours to popularize botanical studies, and always willing to advise and assist others.

Among many minor publications, he was the author of three or four small works, which have been found exceedingly useful. One of the persons who worked with him, and was devoted to the study of botany, and took the very varied and interesting flora of the Kurrajong under her especial care, was Miss Louisa Atkinson (afterwards Mrs. Calvert), whose comparatively early death was a great loss to the botanical world. Woolls died in 1892.

Another botanist, who cannot be passed without notice, was Mr. R. D. Fitzgerald, F.L.S., Deputy Surveyor-General, who was so impressed with the Darwinian theory, that he commenced "to study the family (*Orchideæ*) with more than ordinary zeal, in the hope of adding, as it were, a single stone to the great pile constructed by the boldest speculator of the age." He accumulated a large mass of coloured drawings, shewing not only the plants in life size, but all parts of the flowers, in more than usual detail,

and these were accompanied by very complete botanical descriptions. The drawings were mostly by himself, but in some he was ably assisted by Mr. A. J. Stopps. Fitzgerald generously allowed the Government to publish his work under the name of "Australian Orchids," without any remuneration to himself, and piloted it through the press to the extent of the first volume and four more parts, when, to the great regret of his friends and all lovers of botany, he died in 1892.

One further part was afterwards published, with the able assistance of Mr. Henry Deane, M.A., F.L.S., Engineer-in-Chief for Railways, and Stopps; but the difficulty of carrying on the work, without the help of the author, was found to be insuperable, and the residue of the money, voted by Parliament, was devoted to the preparation and publication, through Mr. J. H. Maiden, F.L.S., Curator of the Botanical Gardens, Sydney, assisted by Mr. W. S. Campbell, F.L.S., of seven parts of an elegant little book called "The Flowering Plants and Ferns of Australia."

In 1892, the Governments of Queensland, New South Wales, Victoria, and South Australia, extended their patronage of botany to a new branch, and published at their joint cost Dr. M. C. Cooke's "Handbook of Australian Fungi," which was illustrated with 36 coloured plates.

The nature of the vegetation of Queensland seems to have greatly encouraged botanical research, for there have always been a considerable number of enthusiasts there. Besides Bailey, I may mention Mr. John F. Shirley, B. Sc., who, during 15 years preceding 1893, had gathered and mounted 2,500 species of plants, being about half of the known flora of the country; also the late Dr. Joseph Bancroft, M.D., whose medical proclivities encouraged him to investigate the chemical properties of plants, and who was then sanguine of success in the preparation of a valuable ophthalmic remedy from *Duboisia myoporoides*, from which a drug, at one time worth over one hundred pounds an ounce, was producible.

Dr. Thomas L. Bancroft, the son of Dr. Joseph Bancroft, appears to have followed in his father's footsteps.

In Victoria, too, the study of botany has been greatly encouraged by Mueller and the numerous publications from time to time issued under his authorship, but New South Wales, South and Western Australia and Tasmania have not been far, if at all, behind.

I cannot here refrain from mentioning, in terms of the highest commendation, two books published by the Department of Agriculture of New South Wales, under the authorship of Mr. Fred. Turner, F.L.S., F.R.H.S., who succeeded Mueller as consulting botanist to Western Australia: "The Forage Plants of Australia" and "Australian Grasses." These books have attracted most favourable notice in many parts of the world, have led to the cultivation of Australian forage plants and grasses in many foreign places, and have induced persons, interested in pastoral pursuits, to devote their attention to our native pasturage, instead of, as heretofore, endeavouring to supersede it by imported and unacclimatised plants, generally worthless and often absolutely injurious.

The only other Australian book, and that a small and unpretentious one, which I shall mention here, is "Australian Botany, Specially Designed for the Use of Schools," which was written by Mr. W. R. Guilfoyle, F.L.S., Director of the Melbourne Botanic Gardens, and supplied a much-felt want, especially because it had been prepared from an Australian standpoint, and was illustrated by figures of common Australian flowers; it is to be hoped that our Government will shortly issue a similar handbook for the use of our public schools.

It would hardly be right, after mentioning Bentham's complaint of the shelving by the British Museum of valuable herbaria, some of which were collected more than a century ago, without also mentioning the fact that, during the past year, the publication of the botany of Cook's First Voyage has at last been commenced, by the issue of Part I., which includes 100 plates of Australian

plants (27 of them being from Botany Bay), and contains Solander's original descriptions and the habitats of the plants figured.

As it had, for some years past, been thought desirable by scientific men, that a thorough examination of Central Australia should be made by experts, Mr. W. A. Horn, in a most noble spirit of patriotism, agreed to pay all the necessary expenses of fitting out an expedition to the M'Donnell Ranges, now known as the Larapintine region, to be conducted by leading men from the various colonies.

The expedition, consisting of 16 men, 26 camels lent by the South Australian Government, and two horses, started in May, 1894, accompanied part of the way by the noble-minded patron, who, after satisfying himself that everything was working smoothly, returned on his lonely ride of 1,000 miles to Adelaide.

No expedition had ever been fitted out so thoroughly, or managed so carefully and with so little discomfort to its members, each of whom worked so enthusiastically at the branch under his particular charge, that the results as a whole were far more important than those obtained by any former expedition; but no vestiges of the archaic flora or fauna, which it had been thought possible might still exist there, could be found. The botanical report of the work of the expedition was prepared by Professor Ralph Tate, F.L.S., F.G.S., who, however, discovered little that was absolutely new: the volumes, containing the whole of the reports, were edited by Professor Baldwin Spencer, M.A. The number of species of plants, known previously to the expedition, to inhabit the Larapintine region, was 502, and that has now been increased to 614.

Space and time will not permit me to mention numbers of zealous botanists, in all the Australian colonies, who have devoted themselves to the furtherance of the interests of botany, but I propose to conclude by giving shortly such particulars as I have been able to obtain with respect to the various botanical establishments maintained at each of the Australian capitals.

SYDNEY.

Naturally, Sydney was the first place in Australia where public Botanical Gardens were established, but there seems to be a little haziness about the time at which this was done.

In 1788, Governor Phillip reported that he had 16 acres of land, situated in the neighbourhood of Sydney Cove (*i.e.*, at Farm Cove), under cultivation on the public account, and in "Tench's Complete Account of the Settlement at Port Jackson," published in 1793, it is stated that, contiguous to Sydney (no doubt at Farm Cove), Phillip had established a Government farm, at the head of which a competent person of his own household was placed, with convicts to work under him; hence the name of "Farm Cove" superseding the aboriginal name of "Wockannagully." It was probably here that the first attempt at cultivation in the Colony was made, but most of the farms (among which was that at Farm Cove) were successively abandoned.

In 1790, Phillip is said to have given to Nicholas Devine permission to occupy part of what is known as "the lower garden," which must have been the land before mentioned, for the purpose of establishing a farm: the lease was afterwards cancelled, and, in 1794, some land at Newtown granted to Devine by way of compensation, and the land leased to him then became, and continued for a long time to be known as, "The Government Garden," but, according to Mr. Edward Stack, it was not until after the arrival of Governor Macquarie, in 1809, that any practical effect was given to Phillip's wishes with regard to public recreation reserves for Sydney.

In the late Dr. Bennett's "Wanderings during 1832-3-4" he expressed regret that the establishment, as a Botanical garden, was not encouraged, it being in fact merely a Government vegetable and fruit garden. And yet this was long after the system of appointing qualified superintendents had been adopted.

In 1816, Mr. Charles Fraser previously mentioned, was appointed the first superintendent of the Gardens. He accompanied Oxley on his two expeditions to the Lachlan River in 1817, as Colonial Botanist, and was an indefatigable explorer and collector. He

visited Swan River in 1826-7, Moreton Bay in 1828, and afterwards Tasmania, and wrote excellent accounts of the vegetation of those districts. Although the name of Fraser, as Colonial Botanist, was included in the list of members of Oxley's first expedition, published in the appendix to his book, as a document enclosed in Governor Macquarie's instructions to him, it is stated in a biographical notice of Allan Cunningham, contained in Hooker's "Journal of Botany," that he met Fraser (for the first time ?) at the depot established on the Lachlan River, and that Fraser was attached to the expedition for the purpose of collecting for Lord Bathurst.

In 1829, the boundaries of the land reserved for the Gardens, &c., were notified ; they included, not only the site of the present Gardens, but also the outer Domain, the Garden Palace grounds, the present Government House grounds, Bennelong Point where Fort Macquarie now stands, the site of the old Government House, the Circular Quay, Obelisk Square, and what are now called Hyde, Phillip, and Cook Parks. The nucleus of the Gardens was then in existence, but a not inconsiderable portion of the reserved land was little more than a preserve for "Five-Corners" (*Styphelia viridis*) and "Geebungs" (*Persoonia lanceolata*), and the public were only admitted on sufferance.

Fraser died in 1831, when John McLean became acting-superintendent until the arrival in 1833, and also after the death, of Richard Cunningham, who had been appointed in Fraser's place, and who was murdered by the blacks in 1835.

Mr. Robinson, on the recommendation of the Macarthurs of Camden, was then appointed temporarily, until Allan Cunningham took his brother's place in 1837 ; but Allan Cunningham resigned in the same year and died in 1839.

In 1840, Mr. John Anderson, botanist to King's expedition to South America, &c. was appointed superintendent, and made considerable collections in the neighbourhood of Sydney.

On the death of Anderson in 1842, Mr. James Kidd was placed temporarily in charge ; at this time the Gardens were under

the management of the trustees of the Australian Museum, the Macarthurs, the McLeays, and the Kings being represented on the Board. These gentlemen recommended Mr. John Carne Bidwill, who was appointed Curator and duly installed. Although the Home Government claimed the right of appointment, they would probably have approved of Bidwill, but, before the news of his appointment reached home, the nomination by Dr. Lindley of Mr. Charles Moore had been approved, to the great annoyance of Sir William Hooker, Director of the Royal Botanical Gardens at Kew, who claimed the right to be consulted, although he had no objection to Moore personally, and became afterwards very friendly with him. Moore, having been allowed time to pay a farewell visit to his friends, did not arrive in Sydney till 1847.

Bidwill's friends, including Sir Stuart Alexander Donaldson, were very angry at his being ousted, and the trustees of the Museum retired from the management of the Gardens. Donaldson, with the view of starving Moore out, moved the reduction of the annual parliamentary vote for the maintenance of the Gardens to £150. Having failed in this, he tried to get them cut up and sold in allotments, and fortunately failed in this also.

Moore, during his tenure of office for nearly half a century, remodelled the greater part of the Gardens, and made so many alterations, additions, and improvements, that he may well be considered to be their founder, in their present form at all events.

In 1893, in conjunction with Mr. Ernst Betche, he published a handbook of the flora of New South Wales, which is useful, but would have been more acceptable to local botanists if he had followed the system employed by Bentham in the "*Flora Australiensis*," instead of that adopted by Mueller. He was superannuated in 1896 in order to make way for Mr. J. H. Maiden, the present Curator.

During Moore's curatorship, a Botanical Museum and National Herbarium, adjoining the Curator's residence, was erected, and occasionally used for the delivery of botanical lectures. This has lately been greatly enlarged and improved, and made worthy of the noble gardens in which it stands.

Besides other rooms, it contains four, which each measure 40 feet by 30 or upwards, and is fitted up with all necessary cases for the storage and display of dried plants and their products, botanical books, &c.; the number of specimens, now amounting to upwards of 8,000, is still increasing.

Since the preparation of this address the collections have been thrown open for the use of the public, and students of Australian botany will find it well worth their while to visit the building, not only casually, but systematically.

The area of the Gardens, without taking the outer Domain into account, is now 93 acres.

BRISBANE.

In 1828, Fraser was sent from Sydney to establish a Botanical Garden for Brisbane, and selected a site containing 42 acres on the north bank of the River Brisbane. Fraser managed the Garden until 1855, when Sir R. R. Mackenzie, Mr. William Augustine Duncan, afterwards Collector of Customs in Sydney, and Mr. T. Jones, were appointed a committee of management, and Mr. Walter Hill, Colonial Botanist and Superintendent. Hill took a great deal of interest in the indigenous and foreign tropical and sub-tropical vegetation, and, from 1874, had the able assistance of Mr. Fred. Turner, until he became manager of the Acclimatization Society's Gardens, Bowen Park, in 1879.

The climate being suitable, these gentlemen made the Garden quite unique in its beauty, enhanced by no less than 40 species of magnificent palms thoroughly acclimatized, by gorgeous flowering trees and shrubs, by a grand avenue of bunyas running along the bank of the river, and by handsome sub-tropical indigenous trees, collected by them from the rich scrubs abounding in the Colony; but, notwithstanding the daily growing beauty of the place, an attempt was made in the early seventies to destroy it by extending the business part of the city over it; this vandalism was fortunately averted.

Hill retired in 1881, when Mr. James Pink was put in charge as head gardener, and was succeeded by Mr. Cowan, who had

charge until 1889, when Mr. Philip McMahon was appointed Curator.

The great flood of 1893, in its haste to reach the sea, without winding round the Gardens, swept across the peninsula, on which they are situated, greatly damaged the noble bunya avenue and all the lower portion of the grounds, landed the Government gunboat in their midst, and left the place in a most deplorable state: a second flood carried the gunboat back into the river, but, of course, otherwise increased the general desolation, from which, however, the place has since entirely recovered.

One of the features, which greatly popularises the gardens, is a beautiful kiosk, where morning bathers can obtain excellent breakfasts, and ladies give delightful *al fresco* tea parties in the afternoon.

McMahon has continued enthusiastically to carry out the idea of making the Gardens, which now cover about 37 acres, as nearly ideally tropical as the climate will allow.

MELBOURNE.

In 1842, Mr. Hoddle, Surveyor-General of Port Phillip (now Victoria), was instructed to survey 50 acres of land in Melbourne, including the site of the present Spencer-street railway station, as a site for a Botanical Garden, but nothing further seems to have been done till 1845, when, at the instance of the Town Council, the present site, on the south bank of the Yarra, was substituted for the original one, and in 1846 placed under the control of Mr. Henry Ginn, Colonial Architect.

In 1847, Mr. John Arthur was appointed superintendent, and commenced operations by fencing in and planting about 5 acres, his management of which reflected great credit upon his skill and industry.

Arthur died in 1849, and Mr. John Dallachy succeeded him; but Mueller, then Colonial Botanist, having been allowed gradually to assume control, was appointed Director, and Dallachy then became Curator, until his retirement about 1861.

In 1873, W. R. Guilfoyle was appointed Director in place of Mueller, who then returned to his original position of Colonial Botanist. At the instance of Guilfoyle thirty acres were added to the existing Gardens, and he commenced to remodel the whole, now measuring 80 acres, constructed lakes, islands, bridges, kiosks, &c, and immensely improved the whole: not the least of his improvements were the careful labelling of all the plants under his care and the establishment of a museum of economic botany.

ADELAIDE.

In 1839, Mr. John Bailey, having been appointed Botanist to South Australia, arrived there and commenced the collection of indigenous plants, but there was as yet no Botanical Garden.

In 1855, at the first meeting of the Botanical Garden Committee, a site containing about 40 acres was determined upon. Mr. George Francis, F.L.S., F.H.S., was appointed superintendent, and held office for ten years, when he resigned through ill-health, and on his death an obelisk was erected to his memory.

In 1857, the Gardens were thrown open to public inspection, and the first catalogue of plants was published next year.

In 1860, on the suggestion of Mueller, Mr. F. G. Waterhouse, afterwards Curator of the Adelaide Museum, was sent, in the interest of the Gardens, to Kangaroo Island, and in four months made a large, varied and most valuable collection.

In 1865, Dr. R. Schomburgk, Ph.D., &c., succeeded Francis and shortly afterwards, at his instance, a house was built for the reception of the *Victoria Regia*, which was planted in 1867; in 1871, the work of planting and cultivation of trees, suitable for railway construction and other purposes, was commenced on a large scale, and it was thought that, in future years, the Colony would be completely independent of extraneous supplies.

The conversion of an unsightly and troublesome creek into a series of lakes, the erection of the Victoria House, a palm house, a museum of objects of botanical interest, a museum of economic botany, the introduction of birds and animals, the importation,



acclimatisation, and distribution of exotic plants, and the cultivation of timber trees, have made the Adelaide Gardens not only popular, but of considerable value to the Colony generally. All the Curators seem to have been endued with such a spirit of zeal and energy as enabled them to overcome the difficult nature of the climate, under which they were obliged to carry on their operations.

Schomburgk died in 1891, and Mr. Maurice Holtze, F.L.S., then Superintendent of the Botanical Garden at Port Darwin, was appointed in his place.

The area of the Adelaide Gardens, including the adjoining Botanical Park, which is managed under the same trust, is about 130 acres.

PERTH.

The Botanical Gardens of Perth adjoin the beautiful Government House Domain, and are managed by Mr. Daniel Feakes as Curator. Mueller was, up to the time of his death, Consulting Botanist, and Mr. Fred. Turner was appointed to succeed him. Dr. A. Morrison is Botanist to the Bureau of Agriculture.

HOBART.

The Botanical Gardens of Hobart are situated on the bank of the Derwent River, and adjoin the Government House grounds. The Royal Society of Tasmania, which came into existence in 1843, I believe had charge of them until 1885, when they were placed by an Act of Parliament under a board of trustees, but little work has been done for want of space and funds.

MEM.—I have been unable to obtain full particulars of the Perth and Hobart Gardens, but if I should succeed in doing so before the issue of the next part of the Proceedings I propose to substitute them for the meagre information given above.

On the motion of Mr. J. R. Garland, M.A., a cordial vote of thanks was accorded to the President for his interesting Address.

The Hon. Treasurer presented the balance-sheet, and moved its adoption, which was carried. The Society's total income for the financial year ending December 31st, 1900, was £1,613 13s. 6d. ; the total expenditure £1,561 15s. 9d., which, with a credit balance of £59 6s. 7d. at the beginning of the year, left the Society's ordinary account with a cash balance of £1 and a credit balance of £45 7s. 0d. (less one cheque for £17 12s. 6d. not presented in time); and the Bacteriology account with a credit balance of £83 18s. 8d. (less one cheque for £1 8s. 10d. not presented in time).

On the motion of the Hon. Treasurer it was resolved that the suspension of the operation of Rule vi., providing for the payment of entrance fees, should be continued for all members nominated or elected during the year 1901.

No other nominations having been received, the President declared the following elections for the current Session to have been duly made :—

PRESIDENT : J. H. Maiden, F.L.S., &c.

MEMBERS OF COUNCIL (to fill six vacancies) : Messrs. J. C. Cox, M.D., F.L.S., T. Storie Dixson, M.B., Ch.M., W. S. Dun, Professor W. A. Haswell, D.Sc., F.R.S., Hon. James Norton, LL D., M.L.C., Perceval R. Pedley.

AUDITORS : Messrs. Duncan Carson and Edward G. W. Palmer, J.P.

ENDOWMENT (CAPITAL).

	£	s.	d.
Amount received from Sir William Macleay in his life-time	14,000	0	0
Further Sum bequeathed by Will £6,000,			
less Probate Duty	5,700	0	0
	£19,700	0	0
Loan A	...	...	...
Loan B	...	...	...
Loan (portion of Loan C, secured with other money by mortgage for £24,000,	11,700	0	0
	£19,700	0	0

BACTERIOLOGY (CAPITAL).

	£	s.	d.
Legacy of £12,000, bequeathed by Sir William Macleay to the University of Sydney (less £600 probate duty), paid by the University into Court and ordered to be paid out to the Society	11,400	0	0
Amount (out of interest received) ordered by the Council to be added to Principal	900	0	0
Further Amount (out of interest received) ordered by the Council to be added to Principal	700	0	0
Further Amount (out of interest received) ordered by the Council to be invested	350	0	0
	£13,350	0	0
Loan (portion of Loan C)	...	...	...
Also £900, from interest, included in Loan C	900	0	0
Loan D	...	...	...
	£11,400	0	0
	£13,350	0	0

March 14th, 1901.

Audited and found correct. We have also seen the securities.

E. G. W. PALMER, }
DUNCAN CARSON, } Auditors.

P. N. TREBECK, Hon. Treasurer.